

TABLE A-1.—PRIMARY TIER 2 EXHAUST EMISSION STANDARDS (G/KW-HR)—Continued

Engine size—liters/cylinder, rated power	Category	Model Year <sup>1</sup>	THC+NO <sub>x</sub> g/kW-hr	CO g/kW-hr	PM g/kW-hr
20.0 ≤disp. <25.0 all power levels .....	Category 2 .....	2007	9.8	5.0	0.50
25.0 ≤disp. <30.0 all power levels .....	Category 2 .....	2007	11.0	5.0	0.50

<sup>1</sup>The model years listed indicate the model years for which the specified standards start.

(b) Exhaust emissions of oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter (and other compounds, as applicable) shall be measured using the procedures set forth in subpart B of this part.

(c) In lieu of the THC+NO<sub>x</sub> standards, and PM standards specified in paragraph (a) of this section, manufacturers may elect to include engine families in the averaging, banking, and trading program, the provisions of which are specified in subpart D of this part. The manufacturer shall then set a family emission limit (FEL) which will serve as the standard for that engine family.

(d)(1) Naturally aspirated engines subject to the standards of this section shall not discharge crankcase emissions into the ambient atmosphere.

(2) For engines using turbochargers, pumps, blowers, or superchargers for air induction, if the engine discharges crankcase emissions into the ambient atmosphere in use, these crankcase emissions shall be included in all exhaust emission measurements.

(e) Exhaust emissions from propulsion engines subject to the standards (or FELs) in paragraph (a), (c), or (f) of this section shall not exceed:

(1) 1.20 times the applicable standards (or FELs) when tested in accordance with the supplemental test procedures specified in § 94.106 at loads greater than or equal to 45 percent of the maximum power at rated speed or 1.50 times the applicable standards (or FELs) at loads less than 45 percent of the maximum power at rated speed; or

(2) 1.25 times the applicable standards (or FELs) when tested over the whole power range in accordance with the supplemental test procedures specified in § 94.106.

(f) The following paragraphs define the requirements for low-emitting Blue Sky Series engines.

(1) *Voluntary standards.* Engines may be designated “Blue Sky Series” en-

gines through the 2010 model year by meeting the voluntary standards listed in Table A-2, which apply to all certification and in-use testing, as follows:

TABLE A-2.—VOLUNTARY EMISSION STANDARDS (G/KW-HR)

Rated Brake Power (kW)	THC+NO <sub>x</sub>	PM
Power ≥37 kW, and displ.<0.9 .....	4.0	0.24
0.9≤displ.<1.2 .....	4.0	0.18
1.2≤displ.<2.5 .....	4.0	0.12
2.5≤displ.<5 .....	5.0	0.12
5≤displ.<15 .....	5.0	0.16
15 ≤disp. <20, and power <3300 kW	5.2	0.30
15 ≤disp. <20, and power ≥3300 kW	5.9	0.30
20 ≤disp. <25 .....	5.9	0.30
25 ≤disp. <30 .....	6.6	0.30

(2) *Additional standards.* Blue Sky Series engines are subject to all provisions that would otherwise apply under this part.

(3) *Test procedures.* Manufacturers may use an alternate procedure to demonstrate the desired level of emission control if approved in advance by the Administrator.

(g) Standards for alternative fuels. The standards described in this section apply to compression-ignition engines, irrespective of fuel, with the following two exceptions:

(1) Engines fueled with natural gas shall comply with NMHC+NO<sub>x</sub> standards that are numerically equivalent to the THC+NO<sub>x</sub> described in paragraph (a) of this section; and

(2) Engines fueled with alcohol fuel shall comply with THCE+NO<sub>x</sub> standards that are numerically equivalent to the THC+NO<sub>x</sub> described in paragraph (a) of this section.

#### § 94.9 Compliance with emission standards.

(a) The general standards and requirements in § 94.7 and the emission standards in § 94.8 apply to each new engine throughout its useful life period. The useful life is specified both in years and in hours of operation, and

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ends when either of the values (hours of operation or years) is exceeded.

(1) The minimum useful life is 10 years or 10,000 hours of operation for Category 1 and 10 years or 20,000 hours of operation for Category 2.

(2) The manufacturer shall specify a longer useful life if the engine is designed to remain in service longer than the applicable minimum useful life without being rebuilt. A manufacturer's recommended time to remanufacture/rebuild longer than the minimum useful life is one indicator of a longer design life.

(3) Upon request by the manufacturer, the Administrator may allow useful life values shorter than the minimum values specified in paragraph (a)(1) of this section, provided:

(i) The useful life value may not be shorter than any of the following:

(A) 1000 hours of operation.

(B) The manufacturer's recommended overhaul interval.

(C) The mechanical warranty provided by the manufacturer to the owner.

(ii) The manufacturer must have documentation from in-use engines showing that these engines will rarely operate longer than the alternate useful life.

(iii) The manufacturer displays the useful life on the engine label.

(b) Certification is the process by which manufacturers apply for and obtain certificates of conformity from EPA, which allows the manufacturer to introduce into commerce new marine engines for sale or use in the U.S.

(1) Compliance with the applicable emission standards by an engine family shall be demonstrated by the certifying manufacturer before a certificate of conformity may be issued under § 94.208. Manufacturers shall demonstrate compliance using emission data, measured using the procedures specified in Subpart B of this part, from a low hour engine. A development engine that is equivalent in design to the marine engines being certified may be used for Category 2 certification.

(2) The emission values to compare with the standards shall be the emission values of a low hour engine, or a development engine, adjusted by the deterioration factors developed in ac-

cordance with the provisions of § 94.219. Before any emission value is compared with the standard, it shall be rounded, in accordance with ASTM E 29–93a (incorporated by reference at § 94.5), to the same number of significant figures as contained in the applicable standard.

(c) Upon request by the manufacturer, the Administrator may limit the applicability of exhaust emission requirements of § 94.8(e) as necessary for safety or to otherwise protect the engine.

### § 94.10 Warranty period.

(a) Warranties imposed by § 94.1107 shall apply for a period of operating hours equal to at least 50 percent of the useful life in operating hours or a period of years equal to at least 50 percent of the useful life in years, whichever comes first.

(b) Warranties imposed by § 94.1107 shall apply for a period not less than any mechanical warranties provided by the manufacturer to the owner.

### § 94.11 Requirements for rebuilding certified engines.

(a) The provisions of this section apply with respect to engines subject to the standards prescribed in § 94.8 and are applicable to the process of engine rebuilding. Engine rebuilding means to overhaul an engine or to otherwise perform extensive service on the engine (or on a portion of the engine or engine system). For the purpose of this definition, perform extensive service means to disassemble the engine (or portion of the engine or engine system), inspect and/or replace many of the parts, and reassemble the engine (or portion of the engine or engine system) in such a manner that significantly increases the service life of the resultant engine.

(b) When rebuilding an engine, portions of an engine, or an engine system, there must be a reasonable technical basis for knowing that the resultant engine is equivalent, from an emissions standpoint, to a certified configuration (i.e., tolerances, calibrations, specifications), and the model year(s) of the resulting engine configuration must be identified. A reasonable basis would exist if:

(1) Parts installed, whether the parts are new, used, or rebuilt, are such that